



SEQUENCE LISTING

<110> Phagotech, Inc.
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<120> DNA SEQUENCES FROM STAPHYLOCOCCUS AUREUS BACTERIOPHAGE 44 AHJD
THAT ENCODE ANTI-MICROBIAL POLYPEPTIDES

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<141> 2000-12-01

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<210> 2
<211> 2286
<212> DNA
<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 2
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<210> 3
 <211> 1944
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

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<210> 4
 <211> 1764
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

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 aaaatatatt ttgtcattga taccattatg acgtatacac aagggaatgt attagagcaa 360
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 aacaaattta gagaggggggt ataa 1764

<210> 5

<211> 1464

<212> DNA

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 5

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 gcagtaaaag agataggtgt ttcacctact ctttttgccg tatatgaaaa aaatgaggggt 240
 tttagttctg gacttggttg gttaaaccat acgtctgcac gtggtgatta tttaacagat 300
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<210> 6
 <211> 1248
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 6
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 gatatagatt attatatatc tatttcaaac cgttctgatg gaaaatcggt caactatggt 180
 tcatttttta tttatttagc tattaactt gatataaaat ttactttatt atcacgtcat 240
 tatacattac gtgacgtta ccgtgatttt attgaagaaa tcatagatga aaatccacta 300
 tttaaatacaa aacgtgtcac gttcagaagt gctagggact atttagctat tatctatcaa 360
 gataaagaaa ttggtgtgat tacagatttg aatagtgcc ctgatttaaa atatcattct 420

aactttttaaa aacactatcc tattattata tatgatgagt ttttagcact tgaagatgat 480
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ggtaacggtg atttatattgg attccctaaa atgtttttac taggtaatgc agtcaacttt 600
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<210> 7
<211> 1227
<212> DNA
<213> Staphylococcus aureus Bacteriophage 44 AHJD

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aattcaaata caatgttcga aacatttgta aataaatatt tattccctaa gattaatgag 180
actttattaa tcgatattgc attaggtaat cgttttaatt ggtagctaa agagcaagat 240
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ttatctaaaa atgaggaatt aatgttgaaa cgtaattatc cacgtatggc aactaagtta 360
tatggtaacg gaattgtgaa gaaacaaaaa ttcacattaa acaacaatga tacacgtttc 420
aatttccaaa cattagcaga cgcaactaat tacgcttttag gtgtatacaa aaagaaaatt 480
tctgatatta atgtattaga agaaaaagaa atgcgtgcaa tgtagttga ttactcattg 540

aatcaattat ccgaaacaaa tgtacgtaaa gcaacatcaa aagaagattt agcaagcaaa 600
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 ttaacaacag attcattaaa atcttatctt ttagatacta agattgcaaa cacattccag 780
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 tatgcgttta ttttgatata taattcaatt aaatataaac gttacacaaa aggtatgtta 1080
 aaaccacat tccataaccc tgaatttgat gaagttacac actggattca ttactattca 1140
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 aaaccagagg aagaattaca agaataa 1227

<210> 8

<211> 984

<212> DNA

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 8

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 ctactaatca actataccaa tcgtgatacg gttggtatag attttattca gttagaatca 180
 gctttaagac aaaacattaa tgtagttggt ggtgaagcta gaaataagca aattatgatt 240
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 atacctgatg attgtctaca aattcataag ctatatgata actgtatgag tggttaacttt 420
 gttgtcatgc aaaataaacc aattcaatat aatagtata tagaaattat agaacattat 480
 actgatgaat tagcagaagt tgctttatct cgcttttctt taatcatgca agcaaaattt 540
 agcaagatat ttaaatacaga aattaatgac gagtcaatca atcaacttgt gtccgaaata 600

tataacggtg caccatttgt taaaatgtca cctatgttta atgcagatga cgatatcatt 660
gatttaacaa gtaatagcgt aatcccagca ttaactgaaa tgaaacggga atatcaaaac 720
aaaattagtg aattaagtaa ctatttaggc attaattcat tagccgttga taaagaaagc 780
ggtgtttcag acgaagaggc aaaaagtaat cgtggattta ccacatcaaa cagtaatatc 840
tatttaaaag gtcgtgaacc aattacgttt ttatcaaagc gttatggttt agatattaaa 900
ccgtattacg atgatgaaac aacgtctaaa atatcaatgg tagacacact ttttaaagat 960
gaaagcagtg atataaatgg ctag 984

<210> 9
<211> 756
<212> DNA
<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 9
atggctagat acacaatgac tttatacgat ttcattaaat cagaattgat taaaaaaggt 60
ttcaatgaat ttgtaaatga taataaatta acgttttatg atgatgaatt tcaattcatg 120
caaaaaatgc tgaagttcga caaagacggt ttagctatcg ttaatgaaaa agtattttaa 180
ggtttttcat tgaaagatga attatcagat ttacttttta aaaaatcatt tacgattcat 240
tttttagata gagaaatcaa cagacaaaca gttgaagcat ttggcatgca agtgattact 300
gtatgtatta cacatgagga ttatttaaat gtggtttatt catcaagtga agttgaaaaa 360
tacttacaat cacaaggctt cacagaacac aatgaagata caacaagtaa cactgatgaa 420
acatcgaatc aaaatgctac atcttttagac aattcaactg gcatgactgc aaacagaaac 480
gcttatgtgt cattaccaca aagtgaggtt aacattgatg ttgataatac aacgttacga 540
ttcgctgata ataatacgat tgataacggt aaaactgtga ataaatcgag taacgaaagt 600
aatcaaaacg caaaacgtaa tcaaatcaa aaaggtaatg caaaaggtag acaattcact 660
aagcagtatt taattgataa tattgataaa gcgtacgatt taagaaagaa aattttaaat 720
gaatttgata aaaaatgttt ttacaaatt tggtag 756

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<210> 10
 <211> 753
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 10
 atgaaatcac aacaacaagc aaaagaatgg atatataagc atgagggggc aggtgttgac 60
 ttgatgggtg catatggatt tcaatgtatg gacttatcag ttgcttatgt gtattacatt 120
 actgacggta aagttcgcac gtggggtaat gctaaagacg cgataaataa tgactttaaa 180
 ggtttagcga cgggtgtataa aaatacacccg agcttttaac ctcaattagg ggacgttgct 240
 gtatatacaa atggacaata tggacatatt caatgtgtgt taagtggaaa tcttgattat 300
 tatacatgct tagaacaaaa ctggttaggc ggcggttttg acggttgga aaaagcaacc 360
 attagaacac attattatga cgggtgtaact cactttatta gacctaaatt ttcaggtagt 420
 aatagcaaag cattagaaac atcaaaagta aatacatttg gaaaatggaa acgaaaccaa 480
 tacggcacat attatagaaa tgaaaatggc acatttacat gtggtttttt accaatat 540
 gcacgtgtcg gtagtccaaa attatcagaa cctaattggc attggttcca accaaacggc 600
 tatacaccat ataacgaagt ttgtttatca gatggttacg tatggattgg ttataactgg 660
 caaggcacac gttattat 720
 agtggttgga ttccttgggg ggtgttctca taa 753

<210> 11
 <211> 483
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 11
 ttggttagac atacgtctga aatggataga tggaaaaaag aaagagaagc tagaaaagag 60
 caagaaaaag atttattttt aaatgatttt agtaatgtta attttaaatt tgatgataaa 120
 gatttacaag aggcgtacat tgacacatgg aaacattttg cacatctgcc ctattttcct 180
 aaagaaagaa acgtatcata tgtaaagtgt gtatcattgg taagagggttc aagacataaa 240
 aaattaaatt atattcttga aatatataac cgtaatgatg attctaataa taaaaacgct 300
 aaaaagcata aatacgcttt atataattta caagctaaaa ataataattc ttcaatgtat 360
 aaatatatta aagaaatcga tactttatat aaagaaattg gtaaatcaga tagaccagt 420

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acaaatattg atgatgaaga tgtgaggtat aactttttat attatgcaac atttgacgaa 480
taa 483

<210> 12
<211> 369
<212> DNA
<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 12
atgacaaacg taaaagatat tttatcaaga caccaaaaca cattagcgag atttgaattt 60
gaggaaaaag aaagagaatt tatcaaacta tcagaattag tagaaaaata cggtatgaaa 120
aaagagtata tcgttagagc attattcaca aacaaagaat caaaattcgg tgaacaaggt 180
gttatcgtca ctgatgacta taacgtaaac ttaccgaacc acttaacaga attaattaaa 240
gaaatgagag cagatgagga cgttggtgac attatcaatg ctggagaagt tcaattcaca 300
atztatgaat atgaaaacaa aaaaggtcaa aaaggttact caatcaattt tggatcaagta 360
tcatttttaa 369

<210> 13
<211> 423
<212> DNA
<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 13
atgaacgaag taaaattcag atttacagac tcagaagcgt ttcacatggt tatatacgct 60
ggggatttaa aattactcta cttttttattt gtattaatgt tcgttgatat tattacaggt 120
atttcaaaag caattaataa taataactta tggatcaaaa aatcaatgag aggatatttct 180
aaaaaattat tgatattctg tattatcatt ttagcaaaca tcattgacca gattttacaa 240
ttaaaggtg gtctactcat gattacaata ttttattata ttgcaaatga gggacttttct 300
attgtagaaa attgtgcaga aatggacgta ttagtaccag aacaaattaa agataaatta 360
agagtcatta aaaatgatac tgaaaagagt gataacaatg aacgatcaag agaagataga 420
taa 423

<210> 14
 <211> 411
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 14
 atgaaaatta aaactacttt tagattaaat aatttaattt attacctttt aacaaataga 60
 gattattata atgataaatt tgaaaaattt acttcatcta ataaaaaatg tataagtaaaa 120
 ataaatatgg gtgatgtgta tattgagttt gacaaacaat atgatgattt tgaaattgaa 180
 aaagagttat ttacgttaga tatcgacatt gatattaaaa aacatgtttt taatatactt 240
 gtatttttatt atagaaatta tttaagtaat gaattaataa gagaaatttt attaaacggt 300
 acaattgacg acgtattatc aaattttgat aaacctcttg aaagcgaatt aatgattatt 360
 tatcaaaaca aagtcatata cgataatggg aaagtgattg accatgaata a 411

<210> 15
 <211> 279
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 15
 atgaaaatgg tacatttaca tgtgggtttt taccaatatt tgcacgtgtc ggtagtccaa 60
 aattatcaga acctaattggc tattgggttcc aaccaaacgg ttatacacca tataacgaag 120
 tttgtttatc agatggttac gtatggattg gttataactg gcaaggcaca cgttattatt 180
 taccagtgcg ccaatggaat ggaaaaacag gtaatagtta cagtgttggt attccttggg 240
 ggggtgttctc ataatgggta ttttagcctt tttctttga . 279

<210> 16
 <211> 243
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 16
 gtgacgataa caccttggtc accgaatttt gattctttgt ttgtgaataa tgctctaacg 60
 atatactctt ttttcatacc gtatttttct actaattctg atagtttgat aaattctctt 120
 tctttttcct caaattcaaa tctcgctaata gtgttttggt gtcttgataa aatatctttt 180

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acgtttgtca ttttatttct cctcttattt aaattatttg ctttctgcaa ttgcgatttg 240
tag 243

<210> 17
<211> 237
<212> DNA
<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 17
atgaaagttg acgacattgt taccttacgt gtcaaagggt atatacttca ttacttagat 60
gatgataatg aatacattga ggaattttta ccacttcacg agtatcattt aaccaaaaca 120
caagcaaaag aattattacc agacacatgt aaactattgt ccactacacg cacaacgaaa 180
acaattcaag tttattacaa tgatttacta caaatcgcaa ttgcagaaag caaataa 237

<210> 18
<211> 222
<212> DNA
<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 18
atggaaagat taaaattgct tctgctggta taccgaaaaa cgcctttgat acaagcgtcg 60
atdddgaac ctttgtacgt gaacaattct ttgacggtgc cattattgaa aacaataaaa 120
gtatctataa tgagcaagggt acaatatcga tatatccgtc taaaactgaa attgtatgtg 180
gtaatgtata tgatgaatat tttactgatg aacttaatat ga 222

<210> 19
<211> 213
<212> DNA
<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 19
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tgctcttttag ctaaccaatt aaaacgatta cctaattgcaa tatcgattaa taaagtctca 120
ttaatcttag ggaataaata tttatttaca aatgtttcga acattgtatt tgaattatcc 180
catttgtcgc caaatgtcca agattttgaa taa 213

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<210> 20
 <211> 207
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 20
 atgttacctg gtttgtataa gtattctttt ttgaataaag gtacaccaat tgctttttta 60
 tatttttctg gtaactgtgc atatgtccag ttaccaccaa tcacacgacc actttttcca 120
 tttggcttga ctgatttacc actaattggg ttatgggtctc cgtcattcatc agtaggatta 180
 gaactactac tcccactatc tacttga 207

<210> 21
 <211> 189
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 21
 atgtctaaac gattttgttt taccatgttt ttgtctcttg taatagttta tgatgtcgtt 60
 tacagtgtta aatttattcg tcaaagtgtg cataatataa aaagttatac ctcacatctt 120
 catcatcaat atttgtcact ggtctatctg attaccaat ttctttatat aaagtatcga 180
 tttctttaa 189

<210> 22
 <211> 183
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 22
 atgcaccatc aaagtcaaca cctgccccct catgcttata tatccattct tttgcttggt 60
 gttgtgattt catttatatc actcctatct ttgatgtttt gctacccaac catattcacg 120
 atgttttggt tccgcattaa cattactgaa gaattcttta tattccgata tattagcctc 180
 taa 183

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<210> 23
 <211> 144
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 23
 atgtttgcta aaatgataat acagaatatc aataattttt tagaaaatcc tctcattgat 60
 ttttttgacc ataagttatt atttttaatt gcttttgaaa tacctgtaat aatatcaacg 120
 aacattaata caaataaaaa gtag 144

<210> 24
 <211> 180
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 24
 atgagaacac cccccaagga ataccaacac tgtaactatt acctgttttt ccattccatt 60
 ggcgcactgg taaataataa cgtgtgcctt gccagttata accaatccat acgtaaccat 120
 ctgataaaca aacttcgtta tatggtgtat aaccgtttgg ttggaaccaa tagccattag 180

<210> 25
 <211> 177
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 25
 gtgtcaatgt acgcctcttg taaatcttta tcatcaaatt taaaattaac attactaaaa 60
 tcatttaaaa ataaatcttt ttcttgctct tttctagctt ctctttcttt tttccatcta 120
 tccatttcag acgtatgtct aaccaatggt atcaacctcc atataaagca taaataa 177

<210> 26
 <211> 177
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 26
 atggaacgta aatacaaaac ggtattatta tattgcatg agattaaagg acattttcca 60
 catcaaactc caatgtttga agatttatat gacgctaaag ttgtatattc atattatgaa 120
 tataacctgt tcactaaaaa atacgcgtat atcatagaat acattaagga gatataa 177

<210> 27
 <211> 168
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 27
 atgaataacc tattaacat agccattggt ttccttttag catttttaac tacacttacc 60
 atacttatga cactgcatat acgcgtgtca tttggtgttt tattcactac attgattata 120
 ttctatatta tctttttaac gggtatttat gctttatatg gaggttga 168

<210> 28
 <211> 165
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 28
 atgattgtct atatccctaa ttttagtaca aaattcatat tgttttgtat atggtacaac 60
 gataatattt gtcataaaag tagttacatt atacatgact ttaatatatt tatcatcagt 120
 tttgatatag aagaaatcac cgttttgatt gatgtgattt cttaa 165

<210> 29
 <211> 165
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 29
 atggaatata tgcacgtcca attgtacctg ctttcatatt ttttgcaaaa tctgcattac 60
 cttttctttg tacgtcttgt ggtacaaagt ggacgatgtt acctgcgtca taccaagacg 120
 gttgtccagc ttgttttgat tgtgatacta actttcttgc tatga 165

<210> 30
 <211> 165
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 30
 gtgttttaac ggaacgtaaa taaaaacgg tattattata ttgcgatgag attaaaggac 60
 attttccaca tcaaattctca atgtttgaag atttatatga cgctaaagtt gtatattcat 120
 attatgaata taacctgttc actaaaaaat acgcgtatat catag 165

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<210> 31
 <211> 162
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 31
 gtgaataaaa caccaaatga cacgctata tgcagtgtca taagtatgat aagtgttaatt 60
 aaaaatgcta aaaggaaaac aatggctatg tttaataggt tattcatggg caatcacttt 120
 cccattatcg tatatgactt tgttttgata aataatcatt aa 162

<210> 32
 <211> 153
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 32
 atgatattgt atagttcatt gttatcatct aaacggaata agttaaagt tgaacgtaat 60
 gcaggatgac catataatcc atttaaaacg actttagata acataacctc ctcatgtgag 120
 tatgggtggt cgttgatatc atcagtaatg tga 153

<210> 33
 <211> 150
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 33
 atggcttggt ttgctaaagc gagtagtgaa ctaccactgt caccactact accactgtca 60
 gacgaatcac taggtgatcc acctttaccg tctaatttac caccccaagc tagaatagta 120
 ttcgcaccgt ctaaaaatgg attaccatag 150

<210> 34
 <211> 150
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 34
 atgccattat ttaaccacct ctaccaaatt tgtaaaaaac attttttatc aaattcattt 60
 aaaattttct ttcttaaate gtacgcttta tcaatattat caattaaata ctgcttagtg 120
 aattgtgtac cttttgcatt acctttttga 150

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<210> 35
 <211> 147
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 35
 atgatgattc taataataaa aacgctaaaa agcataaata cgctttatat aatttacaag 60
 ctaaaaataa taattcttca atgtataaat atattaaaga aatcgatact ttatataaag 120
 aaattggtaa atcagataga ccagtga 147

<210> 36
 <211> 147
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 36
 atgcaacatt tgacgaataa atttaacact gtaaacgaca tcataaacta ttacaaggag 60
 caaaaacatg gtaaaacaaa atcgtttaga catggtaaga gattatcaaa atgctgtcaa 120
 tcatgtcaga aaaaaaatcc cagataa 147

<210> 37
 <211> 147
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 37
 gtgtatacaa taccacacgt gatggtgcaa catatgggtgg tacattatag ttgcaacta 60
 aaaacgaacc atcttcaaaa actgctacaa caacacctgt gtgaccaata ccatatgcag 120
 ttgcttgtaa gtatgggtgg ttactag 147

<210> 38
 <211> 144
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 38
 atgtcgatat ctaacgtaaa taactctttt tcaatttcaa aatcatcata ttgtttgtca 60
 aactcaatat acacatcacc catatttatt ttactatac attttttatt agatgaagta 120
 aatttttcaa atttatcatt ataa 144

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<210> 39
 <211> 144
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 39
 gtgtaccttt tgcattacct ttttgatttt gattacgttt tgcgttttga ttactttcgt 60
 tactcgattt attcacagtt ttaccgttat caatcgtatt attatcagcg aatcgtaacg 120
 ttgtattatc aacatcaatg ttaa 144

<210> 40
 <211> 141
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 40
 gtgctgtatt tacttatgat gtatctaaac ttaaagagtt tactggcaac gttgaagaaa 60
 ttaaaccaaa atcagattta tatgcgttta ttttggatat taattcaatt aaatataaac 120
 gttacacaaa aggtatgtta a 141

<210> 41
 <211> 138
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 41
 gtggtaactg gacatatgca cagttaccag aaaaatataa aaaagcaatt ggtgtacctt 60
 tattcaaaaa agaatactta taaaaccag gtaacatatt tcctcaaacg ggtaatgcag 120
 gacaatgtac agaattaa 138

<210> 42
 <211> 138
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 42
 atgtcgtcaa ctttcattat tatatcactc ctttctaaaa aacgtaaacg ttatacgttt 60
 cataaaatcc tttatgcata ttccattggt ctattgggtc atcaccagca atataagaca 120
 atattgattc tggtttag 138

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<210> 43
 <211> 138
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 43
 atgcacgacc gtcgtctttt gttaatttat agttttgtga acctcttgcg cgtaatgctt 60
 caaagtgttc atactcacca agttggaaga aaccatataa attatggaaa cgttttccac 120
 caccgccgtt tgtcatag 138

<210> 44
 <211> 138
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD'

<400> 44
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 tggattgacg ttctaattccg attgttgtac catgaccacc ctgtacaata cgcatgcttg 120
 aaattaagtc accactag 138

<210> 45
 <211> 135
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 45
 atgttaccta ttacgtgat gatatgtttt ataaagaaaa catggaacgt tattactaca 60
 atccaagcaa ttacattttt gacaatgctt actctaaaaa ttacgtgggtt gataatgata 120
 gatatttata ttttag 135

<210> 46
 <211> 129
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 46
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 gcgtttttcg gtataccagc agaagcaatt ttaatctttc cattcacttc atatgcatat 120
 ttcttatga 129

<210> 47
 <211> 129
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 47
 atgattatcc atttaagtta tcatatcaag acggtattaa tttcccacgt gataacttta 60
 aagagcctga gggatattgc atttatacaa atccaaaaac aaaacgtaaa tcgttattac 120
 ttgctatga 129

<210> 48
 <211> 129
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 48
 atgaatgtat gtaagttggt caggtgtgag ttttgcaaaa catttcacag catagtcata 60
 ggcttcacta tcattcatat cattatcttt atcaaaaatc gtataattaa aatctgtttt 120
 aagttgtga 129

<210> 49
 <211> 129
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 49
 atgaggacgt tgttgacatt atcaatgctg gagaagttca attcacaatt tatgaatatg 60
 aaaacaaaaa aggtcaaaaa ggttactcaa tcaattttgg tcaagtatca ttttaataca 120
 atttcatag 129

<210> 50
 <211> 126
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 50
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 ttgcttatgt gtattacatt actgacggta aagttcgcac gtggggtaat gctaaagacg 120
 cgataa 126

<210> 51
 <211> 126
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 51
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 aaagtcttga tgtattcatt ttatgctttt gtaataaatt gtatatattt aaattggata 120
 atatag 126

<210> 52
 <211> 123
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 52
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 tattctctac atttgtcaca tcacgttcat tgtataactt attggttcct ttccaatact 120
 taa 123

<210> 53
 <211> 123
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 53
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 acacatggaa acattttgca catctgccct attttcctaa agaaagaaac gtatcatatg 120
 taa 123

<210> 54
 <211> 120
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 54
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<210> 55
 <211> 120
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 55
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 ttaagttacg tacaaaatca attattgggtt atcataatga agttcgagta tatccagtag 120

 <210> 56
 <211> 117
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 56
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 aaaattcctc aatgtattca ttatcatcat ctaagtaatg aagtatataa cctttga 117

 <210> 57
 <211> 114
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 57
 gtgagtatta cattacaggt aaccaaattg aattatttag agacgcgcca gaagaaatta 60
 aaaaagtggg tgcattggta cgtgtgtcaa gtggtaacgc agtcggtgaa gtaa 114

 <210> 58
 <211> 111
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 58
 atgtaccacc atatgttgca ccatcacgtg tggatttgta tacactcatt aatggcgtag 60
 caaataatgc tggtgataat attgtattct ttagtggtat tgcttaatta a 111

 <210> 59
 <211> 111
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 59
 atgcatattt cttatgattc agtacaaaca tcttatctat ctgttcgttt tcaatatccc 60

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atttacctaa ggctatcggg tcgaataaac tggggttcaa taagggttta a 111

<210> 60

<211> 111

<212> DNA

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 60

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ctaaaattgc ttttaattgt tccattaaca tggggtcgat gtcacgtata g 111

<210> 61

<211> 111

<212> DNA

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 61

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tatttacttt tgatgtttct aatgctttgc tattactacc tgaaaattta g 111

<210> 62

<211> 108

<212> DNA

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 62

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ttaaattatt tgctttctgc aattgcgatt tgtagtaa cattgtaa 108

<210> 63

<211> 105

<212> DNA

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 63

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actctacaca atccgattct caaaaacctg aagggttttg gataa 105

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<210> 64
 <211> 105
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 64
 atgcgtcttg tatttttttt aataattctt gcatggcttg ttttgctaaa gcgagtagtg 60
 aactaccact gtcaccacta ctaccactgt cagacgaatc actag 105

<210> 65
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 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

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 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

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<210> 68
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<400> 68
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gaagaaaatt tagaatcaac tgaagaaact tcagaatcaa ctgaagaatc aactgaagaa 120
tcaactgaag aatcaactga agataaaaca gtagaaacaa tcgaagaaga aatgaaaac 180
aaattagaac ctactacaac agatgaagat agttcgaaat ttgaccctgt tgtattagaa 240
caacgtattg cttcattaga acaacaagtg actacttttt tatcttcaca aatgcaacaa 300
ccacaacaag tacaacaaac acaatcagat gtaacagaat caaacaaga agataacgac 360
tattcagatg aagaactagt tgataagtta gatttagatt ag 402

<210> 69
<211> 303
<212> DNA
<213> Staphylococcus aureus Bacteriophage 44 AHJD

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ctattcaata aactgattca atggaatcca gcttatacat ttgacaatgc aattaactta 120
ttatcggctt gccacaact attattaaac tataatagtt ctggtgttca attcttaaatt 180
gatgaactaa acaacgaaac taaaccagaa tcaatattgt cttatattgc tggatgatgac 240
ccaatagaac aatggaatat gcataaagga ttttatgaaa cgtataacgt ttacgttttt 300
tag 303

<210> 70
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<212> DNA
<213> Staphylococcus aureus Bacteriophage 44 AHJD

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ttatgtatag cgttatttga tagaacagaa aatgaaattt cattttatga tgttgacatt 120
gatgaaattg aagatttaaa tcataattct gttttacgcy taatttcaac tttattagga 180
agtgataata atggttaa 198

09727852.031001

<210> 71
 <211> 183
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 71
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 aataaacgaa cagaattaaa tgaaaacatg tcaattgata caaataaaag tgaagatagt 120
 tatggtgtac aaattcattc actttcaaaa caatcattta caggtgacgt tgaggaggaa 180
 taa 183

<210> 72
 <211> 150
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 72
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 cactttcaaa acaatcattt acaggtgacg ttgaggagga ataataaatt atggcacaac 120
 aatctacaaa aaatgaaact gcacttttag 150

<210> 73
 <211> 132
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 73
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 caattgacat gttttcattt aattctgttc gtttatttaa tcttgaatct tcatatgatg 120
 taccatcat ag 132

<210> 74
 <211> 111
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 74
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 atagaacgca tgttgtttcc ctcatatg tttaaattcc tcctaattcta a 111

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[illegible]

Met Gly Leu Leu Glu Cys Met Gln Tyr His Lys His Glu Arg Arg Met
1 5 10 15

Arg Lys Lys Pro Thr Lys Tyr Lys Asn Val Thr Tyr Ser Val Ala Ile
35 40 45

Glu Ser Phe Tyr Asp Ala Phe Tyr Thr Tyr Val Lys Arg Arg Asp Thr
65 70 75 80

Lys Tyr Asp Asn His Phe Leu Leu Lys Asp Thr Met Arg Tyr Phe Asp
100 105 110

Asn Ile Thr Arg Glu Asn Ile Tyr Leu Lys Ser Ala Glu Glu Asn Glu
115 120 125

His Thr Leu Lys Met Lys Glu Ala Thr Ile Leu Ala Lys Asn Gln Asn
130 135 140

Val Ile Leu Glu Lys Arg Val Lys Ser Ser Ile Asn Leu Asp Leu Thr
145 150 155 160

Met Phe Leu Asn Gly Phe Lys Phe Asn Ile Ile Asp Asn Phe Met Lys
165 170 175

Thr Asn Thr Ser Ile Ala Thr Leu Gly Lys Lys Leu Leu Asp Gly Gly
180 185 190

Tyr Leu Thr Glu Ser Gln Leu Lys Thr Asp Phe Asn Tyr Thr Ile Phe
195 200 205

Asp Lys Asp Asn Asp Met Asn Asp Ser Glu Ala Tyr Asp Tyr Ala Val
210 215 220

Lys Cys Phe Ala Lys Leu Thr Pro Glu Gln Leu Thr Tyr Ile His Asn
225 230 235 240

00727302-084004

Asp	Val	Ile	Ile	Leu	Gly	Met	Cys	His	Ile	His	Tyr	Ser	Asp	Ile	Phe	245	250	255
Pro	Asn	Phe	Asp	Tyr	Asn	Lys	Leu	Thr	Phe	Ser	Leu	Asn	Ile	Met	Glu	260	265	270
Ser	Tyr	Leu	Asn	Asn	Glu	Met	Thr	Arg	Phe	Gln	Leu	Leu	Asn	Gln	Tyr	275	280	285
Gln	Asp	Ile	Lys	Ile	Ser	Tyr	Thr	His	Tyr	His	Phe	His	Asp	Met	Asn	290	295	300
Phe	Tyr	Asp	Tyr	Ile	Lys	Ser	Phe	Tyr	Arg	Gly	Gly	Leu	Asn	Met	Tyr	305	310	315
Asn	Thr	Lys	Tyr	Ile	Asn	Lys	Leu	Ile	Asp	Glu	Pro	Cys	Phe	Ser	Ile	325	330	335
Asp	Ile	Asn	Ser	Ser	Tyr	Pro	Tyr	Val	Met	Tyr	His	Glu	Lys	Ile	Pro	340	345	350
Thr	Trp	Leu	Tyr	Phe	Tyr	Glu	His	Tyr	Ser	Glu	Pro	Thr	Leu	Ile	Pro	355	360	365
Thr	Phe	Leu	Asp	Asp	Asp	Asn	Tyr	Phe	Ser	Leu	Tyr	Lys	Ile	Asp	Lys	370	375	380
Asp	Val	Phe	Asn	Asp	Asp	Leu	Leu	Ile	Lys	Ile	Lys	Ser	Arg	Val	Leu	385	390	395
Arg	Gln	Met	Ile	Val	Lys	Tyr	Tyr	Asn	Asn	Asp	Asn	Asp	Tyr	Val	Asn	405	410	415
Ile	Asn	Thr	Asn	Thr	Leu	Arg	Met	Ile	Gln	Asp	Ile	Thr	Gly	Ile	Asp	420	425	430
Cys	Met	His	Ile	Arg	Val	Asn	Ser	Phe	Val	Ile	Tyr	Glu	Cys	Glu	Tyr	435	440	445
Phe	His	Ala	Arg	Asp	Ile	Ile	Phe	Gln	Asn	Tyr	Phe	Ile	Lys	Thr	Gln	450	455	460
Gly	Lys	Leu	Lys	Asn	Lys	Ile	Asn	Met	Thr	Ser	Pro	Tyr	Asp	Tyr	His	465	470	475
Ile	Thr	Asp	Asp	Ile	Asn	Glu	His	Pro	Tyr	Ser	Asn	Glu	Glu	Val	Met	485	490	495
Leu	Ser	Lys	Val	Val	Leu	Asn	Gly	Leu	Tyr	Gly	Ile	Pro	Ala	Leu	Arg	500	505	510

00722682260

Ser	His	Phe	Asn	Leu	Phe	Arg	Leu	Asp	Asp	Asn	Asn	Glu	Leu	Tyr	Asn		
		515					520					525					
Ile	Ile	Asn	Gly	Tyr	Lys	Asn	Thr	Glu	Arg	Asn	Ile	Leu	Phe	Ser	Thr		
	530					535					540						
Phe	Val	Thr	Ser	Arg	Ser	Leu	Tyr	Asn	Leu	Leu	Val	Pro	Phe	Gln	Tyr		
545					550					555					560		
Leu	Thr	Glu	Ser	Glu	Ile	Asp	Asp	Asn	Phe	Ile	Tyr	Cys	Asp	Thr	Asp		
				565					570					575			
Ser	Leu	Tyr	Met	Lys	Ser	Val	Val	Lys	Pro	Leu	Leu	Asn	Pro	Ser	Leu		
			580					585					590				
Phe	Asp	Pro	Ile	Ala	Leu	Gly	Lys	Trp	Asp	Ile	Glu	Asn	Glu	Gln	Ile		
		595					600					605					
Asp	Lys	Met	Phe	Val	Leu	Asn	His	Lys	Lys	Tyr	Ala	Tyr	Glu	Val	Asn		
	610					615					620						
Gly	Lys	Ile	Lys	Ile	Ala	Ser	Ala	Gly	Ile	Pro	Lys	Asn	Ala	Phe	Asp		
625					630					635					640		
Thr	Ser	Val	Asp	Phe	Glu	Thr	Phe	Val	Arg	Glu	Gln	Phe	Phe	Asp	Gly		
				645					650					655			
Ala	Ile	Ile	Glu	Asn	Asn	Lys	Ser	Ile	Tyr	Asn	Glu	Gln	Gly	Thr	Ile		
			660					665					670				
Ser	Ile	Tyr	Pro	Ser	Lys	Thr	Glu	Ile	Val	Cys	Gly	Asn	Val	Tyr	Asp		
		675					680					685					
Glu	Tyr	Phe	Thr	Asp	Glu	Leu	Asn	Met	Lys	Arg	Glu	Phe	Ile	Leu	Lys		
	690					695					700						
Asp	Ala	Arg	Glu	Asn	Phe	Asp	His	Ser	Gln	Phe	Asp	Asp	Ile	Leu	Tyr		
705					710					715					720		
Ile	Glu	Ser	Asp	Ile	Gly	Ser	Phe	Ser	Leu	Asn	Asp	Leu	Phe	Pro	Val		
				725					730					735			
Glu	Arg	Ser	Val	His	Asn	Lys	Ser	Asp	Leu	His	Ile	Leu	Lys	Arg	Glu		
			740					745					750				
His	Asp	Glu	Ile	Lys	Lys	Gly	Asn	Cys									
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<210> 76
 <211> 647
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 76

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Phe	Leu	Asp	Glu	Ile	Tyr	Lys	Thr	Arg	Glu	Arg	Tyr	Thr	Pro	Phe	Tyr			
			20					25					30					
Asp	Asp	Arg	Ala	Asp	Tyr	Asn	Thr	Asn	Ser	Lys	Ser	Tyr	Tyr	Asp	Tyr			
		35					40					45						
Ile	Ser	Arg	Leu	Ser	Lys	Leu	Ile	Glu	Val	Leu	Ala	Arg	Arg	Ile	Trp			
	50					55					60							
Asp	Tyr	Asp	Asn	Glu	Leu	Lys	Lys	Arg	Phe	Lys	Asn	Trp	Asp	Asp	Leu			
65					70					75					80			
Met	Lys	Ala	Phe	Pro	Glu	Gln	Ala	Lys	Asp	Leu	Phe	Arg	Gly	Trp	Leu			
				85					90					95				
Asn	Asp	Gly	Thr	Ile	Asp	Ser	Ile	Ile	His	Asp	Glu	Phe	Lys	Lys	Tyr			
			100					105					110					
Ser	Ala	Gly	Leu	Thr	Ser	Ala	Phe	Ala	Leu	Phe	Lys	Val	Thr	Glu	Met			
		115					120					125						
Lys	Gln	Met	Asn	Asp	Phe	Lys	Ser	Glu	Val	Lys	Asp	Leu	Ile	Lys	Asp			
	130					135					140							
Ile	Asp	Arg	Phe	Val	Asn	Gly	Phe	Glu	Leu	Asn	Glu	Leu	Glu	Pro	Lys			
145					150					155					160			
Phe	Val	Met	Gly	Phe	Gly	Gly	Ile	Arg	Asn	Ala	Val	Asn	Gln	Ser	Ile			
				165					170					175				
Asn	Ile	Asp	Lys	Glu	Thr	Asn	His	Met	Tyr	Ser	Thr	Gln	Ser	Asp	Ser			
			180					185					190					
Gln	Lys	Pro	Glu	Gly	Phe	Trp	Ile	Asn	Lys	Leu	Thr	Pro	Ser	Gly	Asp			
		195					200					205						
Leu	Ile	Ser	Ser	Met	Arg	Ile	Val	Gln	Gly	Gly	His	Gly	Thr	Thr	Ile			
	210					215					220							
Gly	Leu	Glu	Arg	Gln	Ser	Asn	Gly	Glu	Met	Lys	Ile	Trp	Leu	His	His			
225					230					235					240			

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Asp	Gly	Val	Ala	Lys 245	Leu	Leu	Gln	Val	Ala	Tyr	Lys	Asp	Asn	Tyr	Val
Leu	Asp	Leu	Glu 260	Glu	Ala	Lys	Gly	Leu	Thr	Asp	Tyr	Thr	Pro 270	Gln	Ser
Leu	Leu	Asn 275	Lys	His	Thr	Phe	Thr 280	Pro	Leu	Ile	Asp	Glu 285	Ala	Asn	Asp
Lys	Leu	Ile 290	Leu	Arg	Phe	Gly 295	Asp	Gly	Thr	Ile	Gln 300	Val	Arg	Ser	Arg
Ala 305	Asp	Val	Lys	Asn	His 310	Ile	Asp	Asn	Val	Glu 315	Lys	Glu	Met	Thr	Ile 320
Asp	Asn	Ser	Glu	Asn 325	Asn	Asp	Asn	Arg	Trp 330	Met	Gln	Gly	Ile	Ala 335	Val
Asp	Gly	Asp	Asp 340	Leu	Tyr	Trp	Leu	Ser 345	Gly	Asn	Ser	Ser	Val 350	Asn	Ser
His	Val	Gln 355	Ile	Gly	Lys	Tyr	Ser 360	Leu	Thr	Thr	Gly	Gln 365	Lys	Ile	Tyr
Asp	Tyr 370	Pro	Phe	Lys	Leu	Ser 375	Tyr	Gln	Asp	Gly	Ile 380	Asn	Phe	Pro	Arg
Asp 385	Asn	Phe	Lys	Glu	Pro 390	Glu	Gly	Ile	Cys	Ile 395	Tyr	Thr	Asn	Pro	Lys 400
Thr	Lys	Arg	Lys	Ser 405	Leu	Leu	Leu	Ala	Met 410	Thr	Asn	Gly	Gly	Gly 415	Gly
Lys	Arg	Phe	His 420	Asn	Leu	Tyr	Gly	Phe 425	Phe	Gln	Leu	Gly	Glu 430	Tyr	Glu
His	Phe	Glu 435	Ala	Leu	Arg	Ala	Arg 440	Gly	Ser	Gln	Asn	Tyr 445	Lys	Leu	Thr
Lys	Asp 450	Asp	Gly	Arg	Ala	Leu 455	Ser	Ile	Pro	Asp	His 460	Ile	Asp	Asp	Leu
Asn 465	Asp	Leu	Thr	Gln	Ala 470	Gly	Phe	Tyr	Tyr	Ile 475	Asp	Gly	Gly	Thr	Ala 480
Glu	Lys	Leu	Lys	Asn 485	Met	Pro	Met	Asn	Gly 490	Ser	Lys	Arg	Ile	Ile 495	Asp
Ala	Gly	Cys	Phe 500	Ile	Asn	Val	Tyr	Pro 505	Thr	Thr	Gln	Thr	Leu 510	Gly	Thr

Val Gln Glu Leu Thr Arg Phe Ser Thr Gly Arg Lys Met Val Lys Met
515 520 525

Val Arg Gly Met Thr Leu Asp Val Phe Thr Leu Lys Trp Asp Tyr Gly
530 535 540

Leu Trp Thr Thr Ile Lys Thr Asp Ala Pro Tyr Gln Glu Tyr Leu Glu
545 550 555 560

Ala Ser Gln Tyr Asn Asn Trp Ile Ala Tyr Val Thr Thr Ala Gly Glu
565 570 575

Tyr Tyr Ile Thr Gly Asn Gln Met Glu Leu Phe Arg Asp Ala Pro Glu
580 585 590

Glu Ile Lys Lys Val Gly Ala Trp Leu Arg Val Ser Ser Gly Asn Ala
595 600 605

Val Gly Glu Val Arg Gln Thr Leu Glu Ala Asn Ile Ser Glu Tyr Lys
610 615 620

Glu Phe Phe Ser Asn Val Asn Ala Glu Thr Lys His Arg Glu Tyr Gly
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Trp Val Ala Lys His Gln Lys
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<210> 77

<211> 587

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 77

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Asp Tyr Gln Asn Thr Ile His Phe Asn Ser Asn Lys Glu Arg Asp Asp
20 25 30

Tyr Phe Leu Asn Gly Arg His Phe Lys Ser Leu Asp Tyr Ser Lys Gln
35 40 45

Pro Tyr Asn Phe Ile Arg Asp Arg Met Glu Ile Asn Val Asp Met Gln
50 55 60

Trp His Asp Ala Gln Gly Ile Asn Tyr Met Thr Phe Leu Ser Asp Phe
65 70 75 80

Glu Asp Arg Arg Tyr Tyr Ala Phe Val Asn Gln Ile Glu Tyr Val Asn
85 90 95

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Asp	Val	Val	Val	Lys	Ile	Tyr	Phe	Val	Ile	Asp	Thr	Ile	Met	Thr	Tyr		
			100					105					110				
Thr	Gln	Gly	Asn	Val	Leu	Glu	Gln	Leu	Ser	Asn	Val	Asn	Ile	Glu	Arg		
		115					120					125					
Gln	His	Leu	Ser	Lys	Arg	Thr	Tyr	Asn	Tyr	Met	Leu	Pro	Met	Leu	Arg		
	130					135					140						
Asn	Asn	Asp	Asp	Val	Leu	Lys	Val	Ser	Asn	Lys	Asn	Tyr	Val	Tyr	Asn		
145					150					155					160		
Gln	Met	Gln	Gln	Tyr	Leu	Glu	Asn	Leu	Val	Leu	Phe	Gln	Ser	Ser	Ala		
				165					170					175			
Asp	Leu	Ser	Lys	Lys	Phe	Gly	Thr	Lys	Lys	Glu	Pro	Asn	Leu	Asp	Thr		
			180					185					190				
Ser	Lys	Gly	Thr	Ile	Tyr	Asp	Asn	Ile	Thr	Ser	Pro	Val	Asn	Leu	Tyr		
		195					200					205					
Val	Met	Glu	Tyr	Gly	Asp	Phe	Ile	Asn	Phe	Met	Asp	Lys	Met	Ser	Ala		
	210					215					220						
Tyr	Pro	Trp	Ile	Thr	Gln	Asn	Phe	Gln	Lys	Val	Gln	Met	Leu	Pro	Lys		
225					230					235					240		
Asp	Phe	Ile	Asn	Thr	Lys	Asp	Leu	Glu	Asp	Val	Lys	Thr	Ser	Glu	Lys		
				245					250					255			
Ile	Thr	Gly	Leu	Lys	Thr	Leu	Lys	Gln	Gly	Gly	Lys	Ser	Lys	Glu	Trp		
			260					265					270				
Ser	Leu	Lys	Asp	Leu	Ser	Leu	Ser	Phe	Ser	Asn	Leu	Gln	Glu	Met	Met		
		275					280					285					
Leu	Ser	Lys	Lys	Asp	Glu	Phe	Lys	His	Met	Ile	Arg	Asn	Glu	Tyr	Met		
	290					295					300						
Thr	Ile	Glu	Phe	Tyr	Asp	Trp	Asn	Gly	Asn	Thr	Met	Leu	Leu	Asp	Ala		
305					310					315					320		
Gly	Lys	Ile	Ser	Gln	Lys	Thr	Gly	Val	Lys	Leu	Arg	Thr	Lys	Ser	Ile		
				325					330					335			
Ile	Gly	Tyr	His	Asn	Glu	Val	Arg	Val	Tyr	Pro	Val	Asp	Tyr	Asn	Ser		
			340					345					350				
Ala	Glu	Asn	Asp	Arg	Pro	Ile	Leu	Ala	Lys	Asn	Lys	Glu	Ile	Leu	Ile		
		355					360					365					

Asp Thr Gly Ser Phe Leu Asn Thr Asn Ile Thr Phe Asn Ser Phe Ala
370 375 380

Gln Val Pro Ile Leu Ile Asn Asn Gly Ile Leu Gly Gln Ser Gln Gln
385 390 395 400

Ala Asn Arg Gln Lys Asn Ala Glu Ser Gln Leu Ile Thr Asn Arg Ile
405 410 415

Asp Asn Val Leu Asn Gly Ser Asp Pro Lys Ser Arg Phe Tyr Asp Ala
420 425 430

Val Ser Val Ala Ser Asn Leu Ser Pro Thr Ala Leu Phe Gly Lys Phe
435 440 445

Asn Glu Glu Tyr Asn Phe Tyr Lys Gln Gln Gln Ala Glu Tyr Lys Asp
450 455 460

Leu Ala Leu Gln Pro Pro Ser Val Thr Glu Ser Glu Met Gly Asn Ala
465 470 475 480

Phe Gln Ile Ala Asn Ser Ile Asn Gly Leu Thr Met Lys Ile Ser Val
485 490 495

Pro Ser Pro Lys Glu Ile Thr Phe Leu Gln Lys Tyr Tyr Met Leu Phe
500 505 510

Gly Phe Glu Val Asn Asp Tyr Asn Ser Phe Ile Glu Pro Ile Asn Ser
515 520 525

Met Thr Val Cys Asn Tyr Leu Lys Cys Thr Gly Thr Tyr Thr Ile Arg
530 535 540

Asp Ile Asp Pro Met Leu Met Glu Gln Leu Lys Ala Ile Leu Glu Ser
545 550 555 560

Gly Val Arg Phe Trp His Asn Asp Gly Ser Gly Asn Pro Met Leu Gln
565 570 575

Asn Pro Leu Asn Asn Lys Phe Arg Glu Gly Val
580 585

<210> 78

<211> 487

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 78

Met Ile Leu Lys Arg Val Ile Thr Met Asn Asp Gln Glu Lys Ile Asp
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Lys	Phe	Thr	His	Ser	Tyr	Ile	Asn	Asp	Asp	Phe	Gly	Leu	Thr	Ile	Asp	
			20					25					30			
Gln	Leu	Val	Pro	Lys	Val	Lys	Gly	Tyr	Gly	Arg	Phe	Asn	Val	Trp	Leu	
		35					40					45				
Gly	Gly	Asn	Glu	Ser	Lys	Ile	Arg	Gln	Val	Leu	Lys	Ala	Val	Lys	Glu	
	50					55					60					
Ile	Gly	Val	Ser	Pro	Thr	Leu	Phe	Ala	Val	Tyr	Glu	Lys	Asn	Glu	Gly	
65					70					75					80	
Phe	Ser	Ser	Gly	Leu	Gly	Trp	Leu	Asn	His	Thr	Ser	Ala	Arg	Gly	Asp	
				85					90					95		
Tyr	Leu	Thr	Asp	Ala	Lys	Phe	Ile	Ala	Arg	Lys	Leu	Val	Ser	Gln	Ser	
			100					105					110			
Lys	Gln	Ala	Gly	Gln	Pro	Ser	Trp	Tyr	Asp	Ala	Gly	Asn	Ile	Val	His	
		115					120					125				
Phe	Val	Pro	Gln	Asp	Val	Gln	Arg	Lys	Gly	Asn	Ala	Asp	Phe	Ala	Lys	
	130					135					140					
Asn	Met	Lys	Ala	Gly	Thr	Ile	Gly	Arg	Ala	Tyr	Ile	Pro	Leu	Thr	Ala	
145					150					155					160	
Ala	Ala	Thr	Trp	Ala	Ala	Tyr	Tyr	Pro	Leu	Gly	Leu	Lys	Ala	Ser	Tyr	
				165					170					175		
Asn	Lys	Val	Gln	Asn	Tyr	Gly	Asn	Pro	Phe	Leu	Asp	Gly	Ala	Asn	Thr	
			180					185					190			
Ile	Leu	Ala	Trp	Gly	Gly	Lys	Leu	Asp	Gly	Lys	Gly	Gly	Ser	Pro	Ser	
		195					200					205				
Asp	Ser	Ser	Asp	Ser	Gly	Ser	Ser	Gly	Asp	Ser	Gly	Ser	Ser	Leu	Leu	
	210					215					220					
Ala	Leu	Ala	Lys	Gln	Ala	Met	Gln	Glu	Leu	Leu	Lys	Lys	Ile	Gln	Asp	
225					230					235					240	
Ala	Leu	Gln	Trp	Asp	Val	His	Ser	Ile	Gly	Ser	Asp	Lys	Phe	Phe	Ser	
				245					250					255		
Asn	Asp	Tyr	Phe	Thr	Leu	Glu	Lys	Thr	Phe	Asn	Asn	Thr	Tyr	His	Ile	
			260					265					270			
Lys	Met	Thr	Ile	Gly	Leu	Leu	Asp	Ser	Leu	Lys	Lys	Leu	Ile	Asp	Ser	
		275					280					285				

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Val Gln Val Asp Ser Gly Ser Ser Ser Ser Asn Pro Thr Asp Asp Asp
290 295 300

Gly Asp His Lys Pro Ile Ser Gly Lys Ser Val Lys Pro Asn Gly Lys
305 310 315 320

Ser Gly Arg Val Ile Gly Gly Asn Trp Thr Tyr Ala Gln Leu Pro Glu
325 330 335

Lys Tyr Lys Lys Ala Ile Gly Val Pro Leu Phe Lys Lys Glu Tyr Leu
340 345 350

Tyr Lys Pro Gly Asn Ile Phe Pro Gln Thr Gly Asn Ala Gly Gln Cys
355 360 365

Thr Glu Leu Thr Trp Ala Tyr Met Ser Gln Leu His Gly Lys Arg Gln
370 375 380

Pro Thr Asp Asp Gly Gln Ile Thr Asn Gly Gln Arg Val Trp Tyr Val
385 390 395 400

Tyr Lys Lys Leu Gly Ala Lys Thr Thr His Asn Pro Thr Val Gly Tyr
405 410 415

Gly Phe Ser Ser Lys Pro Pro Tyr Leu Gln Ala Thr Ala Tyr Gly Ile
420 425 430

Gly His Thr Gly Val Val Val Ala Val Phe Glu Asp Gly Ser Phe Leu
435 440 445

Val Ala Asn Tyr Asn Val Pro Pro Tyr Val Ala Pro Ser Arg Val Val
450 455 460

Leu Tyr Thr Leu Ile Asn Gly Val Pro Asn Asn Ala Gly Asp Asn Ile
465 470 475 480

Val Phe Phe Ser Gly Ile Ala
485

<210> 79
 <211> 415
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD
 <400> 79

Met Val Lys Gln Asn Arg Leu Asp Met Val Arg Asp Tyr Gln Asn Ala
1 5 10 15

Val Asn His Val Arg Lys Lys Ile Pro Asp Lys Tyr Asn Gln Ile Glu
20 25 30

02720101

Ile Val Val Pro Tyr Thr Lys Gln Tyr Glu Phe Cys Thr Lys Ile Arg
305 310 315 320

Asp Ile Asp Asn His Val Thr Tyr Leu Arg Asp Asp Met Phe Tyr Lys
325 330 335

Glu Asn Met Glu Arg Tyr Tyr Tyr Asn Pro Ser Asn Leu His Phe Asp
340 345 350

Asn Ala Tyr Ser Lys Asn Tyr Val Val Asp Asn Asp Arg Tyr Leu Tyr
355 360 365

Leu Asp Met Asn Lys Ile Ile Lys Phe His Ile Lys Asn Glu Met Lys
370 375 380

Lys Asn Met Ser Glu Phe Glu Arg Lys Glu Lys Ile Tyr Glu Asp Asn
385 390 395 400

Tyr Ile Glu Asn Thr Lys Lys Tyr Leu Met Lys Gln Tyr Gly Leu
405 410 415

<210> 80

<211> 408

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 80

Met Ala Gln Gln Ser Thr Lys Asn Glu Thr Ala Leu Leu Val Ala Lys
1 5 10 15

Ser Ala Lys Ser Ala Leu Gln Asp Phe Asn His Asp Tyr Ser Lys Ser
20 25 30

Trp Thr Phe Gly Asp Lys Trp Asp Asn Ser Asn Thr Met Phe Glu Thr
35 40 45

Phe Val Asn Lys Tyr Leu Phe Pro Lys Ile Asn Glu Thr Leu Leu Ile
50 55 60

Asp Ile Ala Leu Gly Asn Arg Phe Asn Trp Leu Ala Lys Glu Gln Asp
65 70 75 80

Phe Ile Gly Gln Tyr Ser Glu Glu Tyr Val Ile Met Asp Thr Val Pro
85 90 95

Ile Asn Met Asp Leu Ser Lys Asn Glu Glu Leu Met Leu Lys Arg Asn
100 105 110

Tyr Pro Arg Met Ala Thr Lys Leu Tyr Gly Asn Gly Ile Val Lys Lys
115 120 125

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Gln	Lys	Phe	Thr	Leu	Asn	Asn	Asn	Asp	Thr	Arg	Phe	Asn	Phe	Gln	Thr	130	135	140	
Leu	Ala	Asp	Ala	Thr	Asn	Tyr	Ala	Leu	Gly	Val	Tyr	Lys	Lys	Lys	Ile	145	150	155	160
Ser	Asp	Ile	Asn	Val	Leu	Glu	Glu	Lys	Glu	Met	Arg	Ala	Met	Leu	Val	165	170	175	
Asp	Tyr	Ser	Leu	Asn	Gln	Leu	Ser	Glu	Thr	Asn	Val	Arg	Lys	Ala	Thr	180	185	190	
Ser	Lys	Glu	Asp	Leu	Ala	Ser	Lys	Val	Phe	Glu	Ala	Ile	Leu	Asn	Leu	195	200	205	
Gln	Asn	Asn	Ser	Ala	Lys	Tyr	Asn	Glu	Val	His	Arg	Ala	Ser	Gly	Gly	210	215	220	
Ala	Ile	Gly	Gln	Tyr	Thr	Thr	Val	Ser	Lys	Leu	Lys	Asp	Ile	Val	Ile	225	230	235	240
Leu	Thr	Thr	Asp	Ser	Leu	Lys	Ser	Tyr	Leu	Leu	Asp	Thr	Lys	Ile	Ala	245	250	255	
Asn	Thr	Phe	Gln	Ile	Ala	Gly	Ile	Asp	Phe	Thr	Asp	His	Val	Ile	Ser	260	265	270	
Phe	Asp	Asp	Leu	Gly	Gly	Val	Phe	Lys	Val	Thr	Lys	Glu	Phe	Lys	Leu	275	280	285	
Gln	Asn	Gln	Asp	Ser	Ile	Asp	Phe	Leu	Arg	Ala	Tyr	Gly	Asp	Tyr	Gln	290	295	300	
Ser	Gln	Leu	Gly	Asp	Thr	Ile	Pro	Val	Gly	Ala	Val	Phe	Thr	Tyr	Asp	305	310	315	320
Val	Ser	Lys	Leu	Lys	Glu	Phe	Thr	Gly	Asn	Val	Glu	Glu	Ile	Lys	Pro	325	330	335	
Lys	Ser	Asp	Leu	Tyr	Ala	Phe	Ile	Leu	Asp	Ile	Asn	Ser	Ile	Lys	Tyr	340	345	350	
Lys	Arg	Tyr	Thr	Lys	Gly	Met	Leu	Lys	Pro	Pro	Phe	His	Asn	Pro	Glu	355	360	365	
Phe	Asp	Glu	Val	Thr	His	Trp	Ile	His	Tyr	Tyr	Ser	Phe	Lys	Ala	Ile	370	375	380	
Ser	Pro	Phe	Phe	Asn	Lys	Ile	Leu	Ile	Thr	Asp	Gln	Asp	Val	Asn	Pro	385	390	395	400

Lys Pro Glu Glu Glu Leu Gln Glu
405

<210> 81

<211> 327

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 81

Met Asn Asn Asp Lys Arg Gly Leu Asn Val Glu Leu Ser Lys Glu Ile
1 5 10 15

Ser Lys Arg Val Val Glu His Arg Asn Arg Phe Lys Arg Leu Met Phe
20 25 30

Asn Arg Tyr Leu Glu Phe Leu Pro Leu Leu Ile Asn Tyr Thr Asn Arg
35 40 45

Asp Thr Val Gly Ile Asp Phe Ile Gln Leu Glu Ser Ala Leu Arg Gln
50 55 60

Asn Ile Asn Val Val Val Gly Glu Ala Arg Asn Lys Gln Ile Met Ile
65 70 75 80

Leu Gly Tyr Val Asn Asn Thr Tyr Phe Asn Gln Ala Pro Asn Phe Ser
85 90 95

Ser Asn Phe Asn Phe Gln Phe Gln Lys Arg Leu Thr Lys Glu Asp Ile
100 105 110

Tyr Phe Ile Val Pro Asp Tyr Leu Ile Pro Asp Asp Cys Leu Gln Ile
115 120 125

His Lys Leu Tyr Asp Asn Cys Met Ser Gly Asn Phe Val Val Met Gln
130 135 140

Asn Lys Pro Ile Gln Tyr Asn Ser Asp Ile Glu Ile Ile Glu His Tyr
145 150 155 160

Thr Asp Glu Leu Ala Glu Val Ala Leu Ser Arg Phe Ser Leu Ile Met
165 170 175

Gln Ala Lys Phe Ser Lys Ile Phe Lys Ser Glu Ile Asn Asp Glu Ser
180 185 190

Ile Asn Gln Leu Val Ser Glu Ile Tyr Asn Gly Ala Pro Phe Val Lys
195 200 205

Met Ser Pro Met Phe Asn Ala Asp Asp Asp Ile Ile Asp Leu Thr Ser
210 215 220

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Glu His Asn Glu Asp Thr Thr Ser Asn Thr Asp Glu Thr Ser Asn Gln
130 135 140

Asn Ala Thr Ser Leu Asp Asn Ser Thr Gly Met Thr Ala Asn Arg Asn
145 150 155 160

Ala Tyr Val Ser Leu Pro Gln Ser Glu Val Asn Ile Asp Val Asp Asn
165 170 175

Thr Thr Leu Arg Phe Ala Asp Asn Asn Thr Ile Asp Asn Gly Lys Thr
180 185 190

Val Asn Lys Ser Ser Asn Glu Ser Asn Gln Asn Ala Lys Arg Asn Gln
195 200 205

Asn Gln Lys Gly Asn Ala Lys Gly Thr Gln Phe Thr Lys Gln Tyr Leu
210 215 220

Ile Asp Asn Ile Asp Lys Ala Tyr Asp Leu Arg Lys Lys Ile Leu Asn
225 230 235 240

Glu Phe Asp Lys Lys Cys Phe Leu Gln Ile Trp
245 250

<210> 83

<211> 250

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 83

Met Lys Ser Gln Gln Gln Ala Lys Glu Trp Ile Tyr Lys His Glu Gly
1 5 10 15

Ala Gly Val Asp Phe Asp Gly Ala Tyr Gly Phe Gln Cys Met Asp Leu
20 25 30

Ser Val Ala Tyr Val Tyr Tyr Ile Thr Asp Gly Lys Val Arg Met Trp
35 40 45

Gly Asn Ala Lys Asp Ala Ile Asn Asn Asp Phe Lys Gly Leu Ala Thr
50 55 60

Val Tyr Lys Asn Thr Pro Ser Phe Lys Pro Gln Leu Gly Asp Val Ala
65 70 75 80

Val Tyr Thr Asn Gly Gln Tyr Gly His Ile Gln Cys Val Leu Ser Gly
85 90 95

Asn Leu Asp Tyr Tyr Thr Cys Leu Glu Gln Asn Trp Leu Gly Gly Gly
100 105 110

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Phe Asp Gly Trp Glu Lys Ala Thr Ile Arg Thr His Tyr Tyr Asp Gly
115 120 125

Val Thr His Phe Ile Arg Pro Lys Phe Ser Gly Ser Asn Ser Lys Ala
130 135 140

Leu Glu Thr Ser Lys Val Asn Thr Phe Gly Lys Trp Lys Arg Asn Gln
145 150 155 160

Tyr Gly Thr Tyr Tyr Arg Asn Glu Asn Gly Thr Phe Thr Cys Gly Phe
165 170 175

Leu Pro Ile Phe Ala Arg Val Gly Ser Pro Lys Leu Ser Glu Pro Asn
180 185 190

Gly Tyr Trp Phe Gln Pro Asn Gly Tyr Thr Pro Tyr Asn Glu Val Cys
195 200 205

Leu Ser Asp Gly Tyr Val Trp Ile Gly Tyr Asn Trp Gln Gly Thr Arg
210 215 220

Tyr Tyr Leu Pro Val Arg Gln Trp Asn Gly Lys Thr Gly Asn Ser Tyr
225 230 235 240

Ser Val Gly Ile Pro Trp Gly Val Phe Ser
245 250

<210> 84

<211> 160

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 84

Leu Val Arg His Thr Ser Glu Met Asp Arg Trp Lys Lys Glu Arg Glu
1 5 10 15

Ala Arg Lys Glu Gln Glu Lys Asp Leu Phe Leu Asn Asp Phe Ser Asn
20 25 30

Val Asn Phe Lys Phe Asp Asp Lys Asp Leu Gln Glu Ala Tyr Ile Asp
35 40 45

Thr Trp Lys His Phe Ala His Leu Pro Tyr Phe Pro Lys Glu Arg Asn
50 55 60

Val Ser Tyr Val Asn Ala Val Ser Leu Val Arg Gly Ser Arg His Lys
65 70 75 80

Lys Leu Asn Tyr Ile Leu Glu Ile Tyr Asn Arg Asn Asp Asp Ser Asn
85 90 95

Asn Lys Asn Ala Lys Lys His Lys Tyr Ala Leu Tyr Asn Leu Gln Ala
100 105 110

Lys Asn Asn Asn Ser Ser Met Tyr Lys Tyr Ile Lys Glu Ile Asp Thr
115 120 125

Leu Tyr Lys Glu Ile Gly Lys Ser Asp Arg Pro Val Thr Asn Ile Asp
130 135 140

Asp Glu Asp Val Arg Tyr Asn Phe Leu Tyr Tyr Ala Thr Phe Asp Glu
145 150 155 160

<210> 85

<211> 122

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 85

Met Thr Asn Val Lys Asp Ile Leu Ser Arg His Gln Asn Thr Leu Ala
1 5 10 15

Arg Phe Glu Phe Glu Glu Lys Glu Arg Glu Phe Ile Lys Leu Ser Glu
20 25 30

Leu Val Glu Lys Tyr Gly Met Lys Lys Glu Tyr Ile Val Arg Ala Leu
35 40 45

Phe Thr Asn Lys Glu Ser Lys Phe Gly Glu Gln Gly Val Ile Val Thr
50 55 60

Asp Asp Tyr Asn Val Asn Leu Pro Asn His Leu Thr Glu Leu Ile Lys
65 70 75 80

Glu Met Arg Ala Asp Glu Asp Val Val Asp Ile Ile Asn Ala Gly Glu
85 90 95

Val Gln Phe Thr Ile Tyr Glu Tyr Glu Asn Lys Lys Gly Gln Lys Gly
100 105 110

Tyr Ser Ile Asn Phe Gly Gln Val Ser Phe
115 120

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<210> 86
 <211> 140
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 86

Met Asn Glu Val Lys Phe Arg Phe Thr Asp Ser Glu Ala Phe His Met
 1 5 10 15

Phe Ile Tyr Ala Gly Asp Leu Lys Leu Leu Tyr Phe Leu Phe Val Leu
 20 25 30

Met Phe Val Asp Ile Ile Thr Gly Ile Ser Lys Ala Ile Lys Asn Asn
 35 40 45

Asn Leu Trp Ser Lys Lys Ser Met Arg Gly Phe Ser Lys Lys Leu Leu
 50 55 60

Ile Phe Cys Ile Ile Ile Leu Ala Asn Ile Ile Asp Gln Ile Leu Gln
 65 70 75 80

Leu Lys Gly Gly Leu Leu Met Ile Thr Ile Phe Tyr Tyr Ile Ala Asn
 85 90 95

Glu Gly Leu Ser Ile Val Glu Asn Cys Ala Glu Met Asp Val Leu Val
 100 105 110

Pro Glu Gln Ile Lys Asp Lys Leu Arg Val Ile Lys Asn Asp Thr Glu
 115 120 125

Lys Ser Asp Asn Asn Glu Arg Ser Arg Glu Asp Arg
 130 135 140

<210> 87
 <211> 136
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 87

Met Lys Ile Lys Thr Thr Phe Arg Leu Asn Asn Leu Ile Tyr Tyr Leu
 1 5 10 15

Leu Thr Asn Arg Asp Tyr Tyr Asn Asp Lys Phe Glu Lys Phe Thr Ser
 20 25 30

Ser Asn Lys Lys Cys Ile Val Lys Ile Asn Met Gly Asp Val Tyr Ile
 35 40 45

Glu Phe Asp Lys Gln Tyr Asp Asp Phe Glu Ile Glu Lys Glu Leu Phe
 50 55 60

Thr Leu Asp Ile Asp Ile Asp Ile Lys Lys His Val Phe Asn Ile Leu
65 70 75 80

Val Phe Tyr Tyr Arg Asn Tyr Leu Ser Asn Glu Leu Ile Arg Glu Ile
85 90 95

Leu Leu Asn Val Thr Ile Asp Asp Val Leu Ser Asn Phe Asp Lys Pro
100 105 110

Leu Glu Ser Glu Leu Met Ile Ile Tyr Gln Asn Lys Val Ile Tyr Asp
115 120 125

Asn Gly Lys Val Ile Asp His Glu
130 135

<210> 88

<211> 92

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 88

Met Lys Met Val His Leu His Val Val Phe Tyr Gln Tyr Leu His Val
1 5 10 15

Ser Val Val Gln Asn Tyr Gln Asn Leu Met Ala Ile Gly Ser Asn Gln
20 25 30

Thr Val Ile His His Ile Thr Lys Phe Val Tyr Gln Met Val Thr Tyr
35 40 45

Gly Leu Val Ile Thr Gly Lys Ala His Val Ile Ile Tyr Gln Cys Ala
50 55 60

Asn Gly Met Glu Lys Gln Val Ile Val Thr Val Leu Val Phe Leu Gly
65 70 75 80

Gly Cys Ser His Asn Gly Tyr Phe Ser Leu Phe Leu
85 90

<210> 89

<211> 80

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 89

Val Thr Ile Thr Pro Cys Ser Pro Asn Phe Asp Ser Leu Phe Val Asn
1 5 10 15

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Asn Ala Leu Thr Ile Tyr Ser Phe Phe Ile Pro Tyr Phe Ser Thr Asn
20 25 30

Ser Asp Ser Leu Ile Asn Ser Leu Ser Phe Ser Ser Asn Ser Asn Leu
35 40 45

Ala Asn Val Phe Trp Cys Leu Asp Lys Ile Ser Phe Thr Phe Val Ile
50 55 60

Leu Phe Leu Leu Leu Phe Lys Leu Phe Ala Phe Cys Asn Cys Asp Leu
65 70 75 80

<210> 90

<211> 78

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 90

Met Lys Val Asp Asp Ile Val Thr Leu Arg Val Lys Gly Tyr Ile Leu
1 5 10 15

His Tyr Leu Asp Asp Asp Asn Glu Tyr Ile Glu Glu Phe Leu Pro Leu
20 25 30

His Glu Tyr His Leu Thr Lys Thr Gln Ala Lys Glu Leu Leu Pro Asp
35 40 45

Thr Cys Lys Leu Leu Ser Thr Thr Arg Thr Thr Lys Thr Ile Gln Val
50 55 60

Tyr Tyr Asn Asp Leu Leu Gln Ile Ala Ile Ala Glu Ser Lys
65 70 75

<210> 91

<211> 73

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 91

Met Glu Arg Leu Lys Leu Leu Leu Leu Val Tyr Arg Lys Thr Pro Leu
1 5 10 15

Ile Gln Ala Ser Ile Leu Lys Pro Leu Tyr Val Asn Asn Ser Leu Thr
20 25 30

Val Pro Leu Leu Lys Thr Ile Lys Val Ser Ile Met Ser Lys Val Gln
35 40 45

Tyr Arg Tyr Ile Arg Leu Lys Leu Lys Leu Tyr Val Val Met Tyr Met
50 55 60

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Met Asn Ile Leu Leu Met Asn Leu Ile
65 70

<210> 92

<211> 70

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 92

Met Leu Ile Gly Thr Val Ser Ile Ile Thr Tyr Ser Ser Leu Tyr Cys
1 5 10 15

Pro Ile Lys Ser Cys Ser Leu Ala Asn Gln Leu Lys Arg Leu Pro Asn
20 25 30

Ala Ile Ser Ile Asn Lys Val Ser Leu Ile Leu Gly Asn Lys Tyr Leu
35 40 45

Phe Thr Asn Val Ser Asn Ile Val Phe Glu Leu Ser His Leu Ser Pro
50 55 60

Asn Val Gln Asp Phe Glu
65 70

<210> 93

<211> 68

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 93

Met Leu Pro Gly Leu Tyr Lys Tyr Ser Phe Leu Asn Lys Gly Thr Pro
1 5 10 15

Ile Ala Phe Leu Tyr Phe Ser Gly Asn Cys Ala Tyr Val Gln Leu Pro
20 25 30

Pro Ile Thr Arg Pro Leu Phe Pro Phe Gly Leu Thr Asp Leu Pro Leu
35 40 45

Ile Gly Leu Trp Ser Pro Ser Ser Ser Val Gly Leu Glu Leu Leu Leu
50 55 60

Pro Leu Ser Thr
65

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SECRET

<400> 94

Met Ser Lys Arg Phe Cys Phe Thr Met Phe Leu Leu Leu Val Ile Val
1 5 10 15

Tyr Asp Val Val Tyr Ser Val Lys Phe Ile Arg Gln Met Leu His Asn
20 25 30

Ile Lys Ser Tyr Thr Ser His Leu His His Gln Tyr Leu Ser Leu Val
35 40 45

Tyr Leu Ile Tyr Gln Phe Leu Tyr Ile Lys Tyr Arg Phe Leu
50 55 60

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<210> 95
<211> 60
<212> PRT
<213> Staphylococcus aureus Bacteriophage 44 AHJD
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<400> 95

Met His His Gln Ser Gln His Leu Pro Pro His Ala Tyr Ile Ser Ile
1 5 10 15

Leu Leu Leu Val Val Val Ile Ser Phe Ile Ser Leu Leu Phe Leu Met
20 25 30

Phe Cys Tyr Pro Thr Ile Phe Thr Met Phe Cys Phe Arg Ile Asn Ile
35 40 45

Thr Glu Glu Phe Phe Ile Phe Arg Tyr Ile Ser Leu
50 55 60

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<210> 96
<211> 47
<212> PRT
<213> Staphylococcus aureus Bacteriophage 44 AHJD
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<400> 96

Met Phe Ala Lys Met Ile Ile Gln Asn Ile Asn Asn Phe Leu Glu Asn
1 5 10 15

Pro Leu Ile Asp Phe Phe Asp His Lys Leu Leu Phe Leu Ile Ala Phe
20 25 30

Glu Ile Pro Val Ile Ile Ser Thr Asn Ile Asn Thr Asn Lys Lys
 35 40 45

<210> 97

<211> 59

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 97

Met Arg Thr Pro Pro Lys Glu Tyr Gln His Cys Asn Tyr Tyr Leu Phe
 1 5 10 15

Phe His Ser Ile Gly Ala Leu Val Asn Asn Asn Val Cys Leu Ala Ser
 20 25 30

Tyr Asn Gln Ser Ile Arg Asn His Leu Ile Asn Lys Leu Arg Tyr Met
 35 40 45

Val Tyr Asn Arg Leu Val Gly Thr Asn Ser His
 50 55

<210> 98

<211> 58

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 98

Val Ser Met Tyr Ala Ser Cys Lys Ser Leu Ser Ser Asn Leu Lys Leu
 1 5 10 15

Thr Leu Leu Lys Ser Phe Lys Asn Lys Ser Phe Ser Cys Ser Phe Leu
 20 25 30

Ala Ser Leu Ser Phe Phe His Leu Ser Ile Ser Asp Val Cys Leu Thr
 35 40 45

Asn Val Ile Asn Leu His Ile Lys His Lys
 50 55

<210> 99

<211> 58

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 99

Met Glu Arg Lys Tyr Lys Thr Val Leu Leu Tyr Cys Asp Glu Ile Lys
 1 5 10 15

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Gly His Phe Pro His Gln Ile Ser Met Phe Glu Asp Leu Tyr Asp Ala
20 25 30

Lys Val Val Tyr Ser Tyr Tyr Glu Tyr Asn Leu Phe Thr Lys Lys Tyr
35 40 45

Ala Tyr Ile Ile Glu Tyr Ile Lys Glu Ile
50 55

<210> 100

<211> 55

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 100

Met Asn Asn Leu Leu Asn Ile Ala Ile Val Phe Leu Leu Ala Phe Leu
1 5 10 15

Ile Thr Leu Ile Ile Leu Met Thr Leu His Ile Arg Val Ser Phe Gly
20 25 30

Val Leu Phe Thr Thr Leu Ile Ile Phe Tyr Ile Ile Phe Leu Met Val
35 40 45

Ile Tyr Ala Leu Tyr Gly Gly
50 55

<210> 101

<211> 54

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 101

Met Ile Val Tyr Ile Pro Asn Phe Ser Thr Lys Phe Ile Leu Phe Cys
1 5 10 15

Ile Trp Tyr Asn Asp Asn Ile Cys His Lys Ser Ser Tyr Ile Ile His
20 25 30

Asp Phe Asn Ile Phe Ile Ile Ser Phe Asp Ile Glu Glu Ile Thr Val
35 40 45

Leu Ile Asp Val Ile Ser
50

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<210> 102
 <211> 54
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 102

 Met Glu Tyr Met His Val Gln Leu Tyr Leu Leu Ser Tyr Phe Leu Gln
 1 5 10 15

 Asn Leu His Tyr Leu Phe Phe Val Arg Leu Val Val Gln Ser Gly Arg
 20 25 30

 Cys Tyr Leu Arg His Thr Lys Thr Val Val Gln Leu Val Leu Ile Val
 35 40 45

 Ile Leu Thr Phe Leu Leu
 50

<210> 103
 <211> 54
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 103

 Val Phe Lys Trp Asn Val Asn Thr Lys Arg Tyr Tyr Tyr Ile Ala Met
 1 5 10 15

 Arg Leu Lys Asp Ile Phe His Ile Lys Ser Gln Cys Leu Lys Ile Tyr
 20 25 30

 Met Thr Leu Lys Leu Tyr Ile His Ile Met Asn Ile Thr Cys Ser Leu
 35 40 45

 Lys Asn Thr Arg Ile Ser
 50

<210> 104
 <211> 53
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

 <400> 104

 Val Asn Lys Thr Pro Asn Asp Thr Arg Ile Cys Ser Val Ile Ser Met
 1 5 10 15

 Ile Ser Val Ile Lys Asn Ala Lys Arg Lys Thr Met Ala Met Phe Asn
 20 25 30

Arg Leu Phe Met Val Asn His Phe Pro Ile Ile Val Tyr Asp Phe Val
 35 40 45

Leu Ile Asn Asn His
 50

<210> 105

<211> 50

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 105

Met Ile Leu Tyr Ser Ser Leu Leu Ser Ser Lys Arg Asn Lys Leu Lys
 1 5 10 15

Cys Glu Arg Asn Ala Gly Met Pro Tyr Asn Pro Phe Lys Thr Thr Leu
 20 25 30

Asp Asn Ile Thr Ser Ser Phe Glu Tyr Gly Cys Ser Leu Ile Ser Ser
 35 40 45

Val Met
 50

<210> 106

<211> 49

<212> PRT

<213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 106

Met Ala Cys Phe Ala Lys Ala Ser Ser Glu Leu Pro Leu Ser Pro Leu
 1 5 10 15

Leu Pro Leu Ser Asp Glu Ser Leu Gly Asp Pro Pro Leu Pro Ser Asn
 20 25 30

Leu Pro Pro Gln Ala Arg Ile Val Phe Ala Pro Ser Lys Asn Gly Leu
 35 40 45

Pro

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<210> 107
 <211> 49
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 107

Met	Pro	Leu	Phe	Asn	His	Leu	Tyr	Gln	Ile	Cys	Lys	Lys	His	Phe	Leu
1				5					10					15	
Ser	Asn	Ser	Phe	Lys	Ile	Phe	Phe	Leu	Lys	Ser	Tyr	Ala	Leu	Ser	Ile
			20					25					30		
Leu	Ser	Ile	Lys	Tyr	Cys	Leu	Val	Asn	Cys	Val	Pro	Phe	Ala	Leu	Pro
		35					40					45			

Phe

<210> 108
 <211> 48
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 108

Met	Met	Ile	Leu	Ile	Ile	Lys	Thr	Leu	Lys	Ser	Ile	Asn	Thr	Leu	Tyr
1				5					10					15	
Ile	Ile	Tyr	Lys	Leu	Lys	Ile	Ile	Ile	Leu	Gln	Cys	Ile	Asn	Ile	Leu
			20					25					30		
Lys	Lys	Ser	Ile	Leu	Tyr	Ile	Lys	Lys	Leu	Val	Asn	Gln	Ile	Asp	Gln
		35					40					45			

<210> 109
 <211> 48
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 109

Met	Gln	His	Leu	Thr	Asn	Lys	Phe	Asn	Thr	Val	Asn	Asp	Ile	Ile	Asn
1				5					10					15	
Tyr	Tyr	Lys	Glu	Gln	Lys	His	Gly	Lys	Thr	Lys	Ser	Phe	Arg	His	Gly
			20					25					30		
Lys	Arg	Leu	Ser	Lys	Cys	Cys	Gln	Ser	Cys	Gln	Lys	Lys	Asn	Pro	Arg
		35					40					45			

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<210> 110
 <211> 48
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 110

Val Tyr Thr Ile Pro His Val Met Val Gln His Met Val Val His Tyr
 1 5 10 15

Ser Leu Gln Leu Lys Thr Asn His Leu Gln Lys Leu Leu Gln Gln His
 20 25 30

Leu Cys Asp Gln Tyr His Met Gln Leu Leu Val Ser Met Val Val Tyr
 35 40 45

<210> 111
 <211> 47
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 111

Met Ser Ile Ser Asn Val Asn Asn Ser Phe Ser Ile Ser Lys Ser Ser
 1 5 10 15

Tyr Cys Leu Ser Asn Ser Ile Tyr Thr Ser Pro Ile Phe Ile Phe Thr
 20 25 30

Ile His Phe Leu Leu Asp Glu Val Asn Phe Ser Asn Leu Ser Leu
 35 40 45

<210> 112
 <211> 47
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 112

Val Tyr Leu Leu His Tyr Leu Phe Asp Phe Asp Tyr Val Leu Arg Phe
 1 5 10 15

Asp Tyr Phe Arg Tyr Ser Ile Tyr Ser Gln Phe Tyr Arg Tyr Gln Ser
 20 25 30

Tyr Tyr Tyr Gln Arg Ile Val Thr Leu Tyr Tyr Gln His Gln Cys
 35 40 45

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<210> 113
 <211> 46
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 113

Val Leu Tyr Leu Leu Met Met Tyr Leu Asn Leu Lys Ser Leu Leu Ala
 1 5 10 15

Thr Leu Lys Lys Leu Asn Gln Asn Gln Ile Tyr Met Arg Leu Phe Trp
 20 25 30

Ile Leu Ile Gln Leu Asn Ile Asn Val Thr Gln Lys Val Cys
 35 40 45

<210> 114
 <211> 45
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 114

Val Val Thr Gly His Met His Ser Tyr Gln Lys Asn Ile Lys Lys Gln
 1 5 10 15

Leu Val Tyr Leu Tyr Ser Lys Lys Asn Thr Tyr Thr Asn Gln Val Thr
 20 25 30

Tyr Phe Leu Lys Arg Val Met Gln Asp Asn Val Gln Asn
 35 40 45

<210> 115
 <211> 45
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 115

Met Ser Ser Thr Phe Ile Ile Ile Ser Leu Leu Ser Lys Lys Arg Lys
 1 5 10 15

Arg Tyr Thr Phe His Lys Ile Leu Tyr Ala Tyr Ser Ile Val Leu Leu
 20 25 30

Gly His His Gln Gln Tyr Lys Thr Ile Leu Ile Leu Val
 35 40 45

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<210> 116
 <211> 45
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 116

Met His Asp Arg Arg Leu Leu Leu Ile Tyr Ser Phe Val Asn Leu Leu
 1 5 10 15

Arg Val Met Leu Gln Ser Val His Thr His Gln Val Gly Arg Asn His
 20 25 30

Ile Asn Tyr Gly Asn Val Phe His His Arg Arg Leu Ser
 35 40 45

<210> 117
 <211> 45
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 117

Met Arg Leu Val Thr Val Leu Gln His His Arg Asp Val Thr Arg Phe
 1 5 10 15

Ser Phe His His Trp Ile Asp Val Leu Ile Arg Leu Leu Tyr His Asp
 20 25 30

His Pro Val Gln Tyr Ala Cys Leu Lys Leu Ser His His
 35 40 45

<210> 118
 <211> 44
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 118

Met Leu Pro Ile Tyr Val Met Ile Cys Phe Ile Lys Lys Thr Trp Asn
 1 5 10 15

Val Ile Thr Thr Ile Gln Ala Ile Tyr Ile Leu Thr Met Leu Thr Leu
 20 25 30

Lys Ile Thr Trp Leu Ile Met Ile Asp Ile Tyr Ile
 35 40

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<210> 119
 <211> 42
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 119

Met Ala Pro Ser Lys Asn Cys Ser Arg Thr Lys Val Ser Lys Ser Thr
 1 5 10 15

Leu Val Ser Lys Ala Phe Phe Gly Ile Pro Ala Glu Ala Ile Leu Ile
 20 25 30

Phe Pro Phe Thr Ser Tyr Ala Tyr Phe Leu
 35 40

<210> 120
 <211> 42
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 120

Met Ile Ile His Leu Ser Tyr His Ile Lys Thr Val Leu Ile Ser His
 1 5 10 15

Val Ile Thr Leu Lys Ser Leu Arg Val Phe Ala Phe Ile Gln Ile Gln
 20 25 30

Lys Gln Asn Val Asn Arg Tyr Tyr Leu Leu
 35 40

<210> 121
 <211> 42
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 121

Met Asn Val Cys Lys Leu Phe Arg Cys Glu Phe Cys Lys Thr Phe His
 1 5 10 15

Ser Ile Val Ile Gly Phe Thr Ile Ile His Ile Ile Ile Phe Ile Lys
 20 25 30

Asn Arg Ile Ile Lys Ile Cys Phe Lys Leu
 35 40

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<210> 125
 <211> 40
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 125

Met Ile Thr Met Asn Tyr Thr Ile Ser Leu Thr Val Thr Lys Thr Leu
 1 5 10 15

Asn Val Ile Tyr Tyr Ser Leu His Leu Ser His His Val His Cys Ile
 20 25 30

Thr Tyr Trp Phe Leu Ser Asn Thr
 35 40

<210> 126
 <211> 40
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 126

Met Ile Leu Val Met Leu Ile Leu Asn Leu Met Ile Lys Ile Tyr Lys
 1 5 10 15

Arg Arg Thr Leu Thr His Gly Asn Ile Leu His Ile Cys Pro Ile Phe
 20 25 30

Leu Lys Lys Glu Thr Tyr His Met
 35 40

<210> 127
 <211> 39
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 127

Met Trp Phe Ile His Gln Val Lys Leu Lys Asn Thr Tyr Asn His Lys
 1 5 10 15

Ala Ser Gln Asn Thr Met Lys Ile Gln Gln Val Thr Leu Met Lys His
 20 25 30

Arg Ile Lys Met Leu His Leu
 35

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<210> 128
 <211> 39
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 128

Met Thr Gly Met Glu Ile Arg Cys Tyr Ser Thr Leu Val Arg Phe His
 1 5 10 15

Lys Lys Leu Val Leu Ser Tyr Val Gln Asn Gln Leu Leu Val Ile Ile
 20 25 30

Met Lys Phe Glu Tyr Ile Gln
 35

<210> 129
 <211> 38
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 129

Met Cys Leu Val Ile Ile Leu Leu Leu Val Phe Trp Leu Asn Asp Thr
 1 5 10 15

Arg Glu Val Val Lys Ile Pro Gln Cys Ile His Tyr His His Leu Ser
 20 25 30

Asn Glu Val Tyr Asn Leu
 35

<210> 130
 <211> 37
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 130

Val Ser Ile Thr Leu Gln Val Thr Lys Trp Asn Tyr Leu Glu Thr Arg
 1 5 10 15

Gln Lys Lys Leu Lys Lys Trp Val His Gly Tyr Val Cys Gln Val Val
 20 25 30

Thr Gln Ser Val Lys
 35

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<210> 131
 <211> 36
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 131

Met Tyr His His Met Leu His His His Val Trp Tyr Cys Ile His Ser
 1 5 10 15

Leu Met Ala Tyr Gln Ile Met Leu Val Ile Ile Leu Tyr Ser Leu Val
 20 25 30

Val Leu Leu Asn
 35

<210> 132
 <211> 36
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 132

Met His Ile Ser Tyr Asp Ser Val Gln Thr Ser Tyr Leu Ser Val Arg
 1 5 10 15

Phe Gln Tyr Pro Ile Tyr Leu Arg Leu Ser Gly Arg Ile Asn Trp Gly
 20 25 30

Ser Ile Arg Val
 35

<210> 133
 <211> 36
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 133

Met Asp Phe Val Thr Leu Asp Tyr Leu Asn Arg His Tyr Ala Lys Ile
 1 5 10 15

Leu His Gln Ile Leu Lys Leu Leu Leu Ile Val Pro Leu Thr Trp Gly
 20 25 30

Arg Cys His Val
 35

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<210> 134
 <211> 36
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 134

Met Tyr His Phe His Phe Tyr Asn Met Cys Arg Ile Gly Phe Val Ser
 1 5 10 15

Ile Phe Gln Met Tyr Leu Leu Leu Met Phe Leu Met Leu Cys Tyr Tyr
 20 25 30

Tyr Leu Lys Ile
 35

<210> 135
 <211> 35
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 135

Met Cys Phe Gly Val Leu Ile Lys Tyr Leu Leu Arg Leu Ser Phe Tyr
 1 5 10 15

Phe Ser Ser Tyr Leu Asn Tyr Leu Leu Ser Ala Ile Ala Ile Cys Ser
 20 25 30

Lys Ser Leu
 35

<210> 136
 <211> 34
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 136

Val Val Phe Ala Thr Gln Leu Thr Asn Leu Leu Ile Leu Ile Lys Lys
 1 5 10 15

Gln Ile Thr Cys Thr Leu His Asn Pro Ile Leu Lys Asn Leu Lys Val
 20 25 30

Phe Gly

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<210> 137
 <211> 34
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 137

Met Arg Leu Val Phe Phe Leu Ile Ile Leu Ala Trp Leu Val Leu Leu
 1 5 10 15

Lys Arg Val Val Asn Tyr His Cys His His Tyr Tyr His Cys Gln Thr
 20 25 30

Asn His

<210> 138
 <211> 33
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 138

Met Thr Ser Gln Ser Ile Asn Leu Cys Pro Lys Tyr Ile Thr Val His
 1 5 10 15

His Leu Leu Lys Cys His Leu Cys Leu Met Gln Met Thr Ile Ser Leu
 20 25 30

Ile

<210> 139
 <211> 33
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 139

Val Val Glu Asn Val Ser Ile Ile Tyr Met Val Ser Ser Asn Leu Val
 1 5 10 15

Ser Met Asn Thr Leu Lys His Tyr Ala Gln Glu Val His Lys Thr Ile
 20 25 30

Asn

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<210> 140
 <211> 33
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 140

Met Ile Phe Phe Ile Leu Lys Val Thr Ser Val His Phe His Leu Thr
 1 5 10 15

Thr Tyr Phe Gln Leu Asn Val Gln Tyr Ile Thr Asn Leu Ile Cys Ile
 20 25 30

Tyr

<210> 141
 <211> 133
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 141

Met Thr Glu Phe Asp Glu Ile Val Lys Pro Asp Asp Lys Glu Glu Thr
 1 5 10 15

Ser Glu Ser Thr Glu Glu Asn Leu Glu Ser Thr Glu Glu Thr Ser Glu
 20 25 30

Ser Thr Glu Glu Ser Thr Glu Glu Ser Thr Glu Glu Ser Thr Glu Asp
 35 40 45

Lys Thr Val Glu Thr Ile Glu Glu Glu Asn Glu Asn Lys Leu Glu Pro
 50 55 60

Thr Thr Thr Asp Glu Asp Ser Ser Lys Phe Asp Pro Val Val Leu Glu
 65 70 75 80

Gln Arg Ile Ala Ser Leu Glu Gln Gln Val Thr Thr Phe Leu Ser Ser
 85 90 95

Gln Met Gln Gln Pro Gln Gln Val Gln Gln Thr Gln Ser Asp Val Thr
 100 105 110

Glu Ser Asn Lys Glu Asp Asn Asp Tyr Ser Asp Glu Glu Leu Val Asp
 115 120 125

Lys Leu Asp Leu Asp
 130

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<210> 142
 <211> 100
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 142

Met Val Asn Val Asp Asn Ala Pro Glu Glu Lys Gly Gln Ala Tyr Thr
 1 5 10 15

Glu Met Leu Gln Leu Phe Asn Lys Leu Ile Gln Trp Asn Pro Ala Tyr
 20 25 30

Thr Phe Asp Asn Ala Ile Asn Leu Leu Ser Ala Cys Gln Gln Leu Leu
 35 40 45

Leu Asn Tyr Asn Ser Ser Val Val Gln Phe Leu Asn Asp Glu Leu Asn
 50 55 60

Asn Glu Thr Lys Pro Glu Ser Ile Leu Ser Tyr Ile Ala Gly Asp Asp
 65 70 75 80

Pro Ile Glu Gln Trp Asn Met His Lys Gly Phe Tyr Glu Thr Tyr Asn
 85 90 95

Val Tyr Val Phe
 100

<210> 143
 <211> 65
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 143

Met Glu Asn Glu Thr Lys Asn Ile Glu Leu Lys His Val Phe Arg Phe
 1 5 10 15

Lys Asn Gly Ser Leu Cys Ile Ala Leu Phe Asp Arg Thr Glu Asn Glu
 20 25 30

Ile Ser Phe Tyr Asp Val Asp Ile Asp Glu Ile Glu Asp Leu Asn His
 35 40 45

Asn Ser Val Leu Arg Val Ile Ser Thr Leu Leu Gly Ser Asp Asn Asn
 50 55 60

Gly
 65

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<210> 144
 <211> 60
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 144

Met Tyr Glu Gly Asn Asn Met Arg Ser Met Met Gly Thr Ser Tyr Glu
 1 5 10 15

Asp Ser Arg Leu Asn Lys Arg Thr Glu Leu Asn Glu Asn Met Ser Ile
 20 25 30

Asp Thr Asn Lys Ser Glu Asp Ser Tyr Gly Val Gln Ile His Ser Leu
 35 40 45

Ser Lys Gln Ser Phe Thr Gly Asp Val Glu Glu Glu
 50 55 60

<210> 145
 <211> 49
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 145

Met Lys Thr Cys Gln Leu Ile Gln Ile Lys Val Lys Ile Val Met Val
 1 5 10 15

Tyr Lys Phe Ile His Phe Gln Asn Asn His Leu Gln Val Thr Leu Arg
 20 25 30

Arg Asn Asn Lys Leu Trp His Asn Asn Leu Gln Lys Met Lys Leu His
 35 40 45

Phe

<210> 146
 <211> 43
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 146

Met Ile Val Leu Lys Val Asn Glu Phe Val His His Asn Tyr Leu His
 1 5 10 15

Phe Tyr Leu Tyr Gln Leu Thr Cys Phe His Leu Ile Leu Phe Val Tyr
 20 25 30

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Leu Ile Leu Asn Leu His Met Met Tyr Pro Ser
 35 40

<210> 147
 <211> 36
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD
 <400> 147

Met Phe Ser Phe Asn Ser Val Arg Leu Phe Asn Leu Glu Ser Ser Tyr
 1 5 10 15

Asp Val Pro Ile Ile Glu Arg Met Leu Phe Pro Ser Tyr Met Phe Lys
 20 25 30

Phe Leu Leu Ile
 35

<210> 148
 <211> 53
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD
 <400> 148

gatcccggtc gaccaagctt tacccatagc acgtcccaga ctacgccagc tga 53

<210> 149
 <211> 53
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD
 <400> 149

agcttcagct ggcgtagtct gggacgtcgt atgggtaaag cttggtcgac cgg 53

<210> 150
 <211> 21
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD
 <400> 150

aattctcgag taaaataaca t 21

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<210> 151
 <211> 37
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 151
 cgggatccgc ctccttttct caacagtcac ctgattt 37

<210> 152
 <211> 27
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 152
 cgggatccat gaggggttcc gaagacg 27

<210> 153
 <211> 24
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 153
 cccaagctta caatttgac tttc 24

<210> 154
 <211> 27
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 154
 ccgctcgagc tccaaattcc aaaacag 27

<210> 155
 <211> 26
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 155
 cgggatccaa taagactcct ttttac 26

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<210> 156
 <211> 10
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 156
 gcgtcgaccg 10

<210> 157
 <211> 20
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 157
 tattatccaa aacttgaaca 20

<210> 158
 <211> 20
 <212> DNA
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 158
 cggtggtata tccagtgatt 20

<210> 159
 <211> 133
 <212> PRT
 <213> Staphylococcus aureus Bacteriophage 44 AHJD

<400> 159

Met Lys Ile Lys Val Lys Lys Glu Met Arg Leu Asp Glu Leu Ile Lys
 1 5 10 15

Trp Ala Arg Glu Asn Pro Asp Leu Ser Gln Cys Lys Ile Phe Phe Ser
 20 25 30

Thr Gly Phe Ser Asp Gly Phe Val Arg Phe His Pro Asn Thr Asn Lys
 35 40 45

Cys Ser Thr Ser Ser Phe Ile Pro Ile Asp Ile Pro Phe Ile Val Asp
 50 55 60

Ile Glu Lys Glu Val Thr Glu Glu Thr Lys Val Asp Arg Leu Ile Glu
 65 70 75 80

Leu Phe Glu Ile Gln Glu Gly Asp Tyr Asn Ser Thr Leu Tyr Glu Asn
 85 90 95

Thr Ser Ile Lys Glu Cys Leu Tyr Gly Arg Cys Val Pro Thr Lys Ala
 100 105 110

Phe Tyr Ile Leu Asn Asp Asp Leu Thr Met Thr Leu Ile Trp Lys Asp
 115 120 125

Gly Glu Leu Leu Val
 130



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